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AUTHOR Weisgerber, Robert A.; Smith, Claudette A.
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ABSTRACT

The project was designed to develop a comprehensive set of instructional materials for use in the training of vocational educators who will be instructing handicapped students as a part of their regular classes. These materials were to convey information at various levels of specificity, including (1) a general understanding of the attitudes, problems, and concerns which affect the handicapped group, (2) an awareness of the needs arising from selected types of disabilities and impairments, and (3) a strategy for use when planning education for a handicapped student. Priorities for content in the resulting seven modules of instruction were established cooperatively with an advisory panel, and were developed in cooperation with consultants knowledgeable in the various handicapping conditions. Overall, the modules were found to meet or surpass the evaluators' expectations in terms of providing information on five main ideas: Rights and entitlements, attitudes toward the handicapped, information about different handicapped conditions, training the handicapped for competitive employment, and helping a particular handicapped student. (Author/HD)

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IMPROVING VOCATIONAL EDUCATION SERVICES FOR HANDICAPPED STUDENTS

FINAL REPORT

Grant No. G007500391

Robert A. Weisgerber
and
Claudette A. Smith

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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Bureau of Occupational and Adult Education
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Washington, D.C.

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CE 011 868

ABSTRACT

Purpose of the Project

The purpose of this grant was to develop a comprehensive set of instructional materials for use in the training of vocational educators who, as a result of recent legislation, will increasingly be instructing handicapped students as a part of their regular classes. These materials were to convey information at various levels of specificity, including a) a general understanding of the attitudes, problems, and concerns which affect the handicapped as a group, b) an awareness of the needs arising from selected types of disabilities and impairments, and c) a strategy for use when planning education for an individual handicapped student.

Project Design

Priorities for content in the seven modules of instruction were established cooperatively with an Advisory Panel, consisting of vocational educators representing the different constituencies of state and local school districts, university and colleges, and regional occupation programs. The modules were developed in cooperation with California state education department consultants knowledgeable in the various handicapping conditions being discussed. These include the orthopedically handicapped, visually handicapped, communication impaired, and mentally retarded.

Useful examples, information, and adjunct audiovisual documentation of ongoing programs were accomplished with the cooperation of 14 school districts and agencies in California.

Two of these districts participated in pilot testing. Field testing was conducted in three high schools, three regional occupational programs, a county office, and a university graduate class, none of which had previously been involved in the project.

Results

Although the field testing was necessarily limited in terms of the numbers of persons acting as evaluators, it did represent a varied group ranging from superintendents to pre-service teachers, and covering a variety of occupational areas. Overall, the modules were found to meet or surpass the evaluators' expectations in terms of providing information on five main ideas, when compared with their needs and interests as expressed before reading the modules. In 23 of 25 comparisons this proved to be the case; in the two which did not meet readers' expectations, the writers had not planned the modules to cover those main ideas in a major way. Anecdotal comments on the evaluation forms and follow-up interviews were preponderantly positive, indicating a general usefulness for the materials as perceived by educators in the field.

Implications

This project emphasized prototype materials development, and, as such, achieved its major purpose. It is important, however, that these materials be made readily available to school districts through various

dissemination channels. A number of these are suggested in the recommendations section, and a limited number of copies were prepared to initiate dissemination through chief state school officers and other key persons until a formal dissemination source is established.

As to the future, further development work should be done on two modules not included in this series due to limited grant funding. They should deal with the handicaps of emotional disorders and learning disabilities.

ACKNOWLEDGMENT

This project was a cooperative effort involving a number of individuals who share a common belief that, if given appropriate opportunities, many handicapped persons can effectively participate in regular vocational education programs and equip themselves for productive, independent adult lives.

Mr. Ted Hawthorne, consultant in the California Department of Education, was especially helpful throughout the project, both as an Advisory Panelist and as a special State Department Consultant. Dr. Ralph Bohn, Dean of Continuing Education at San Jose State University, gave us insights as to the credit earning potential of the modules and otherwise made numerous, constructive suggestions. Mr. Robert Hendricks, administrator in the San Mateo County Regional Occupational Program, Ms. Emogene Driscoll, coordinator of Vocational Education for the Handicapped in the San Jose Unified School District, Mr. Tom Kellis, resource teacher in the Berkeley schools, and Mr. Dan Cahn, administrator of an adult education program for handicapped persons in Castro Valley, California, all vigorously participated in their roles as Advisory Panelists. Together, they helped to ensure that the project would reflect a balanced perspective and meet practical needs in the field.

The expert knowledge shared with the project by the special consultants at the state level cannot be overstated. In spite of their tremendously busy schedules, Dr. Gordon Duck, Dr. Winnie Bachmann, Mr. Jack Hazekamp, Mr. Fred Hansen, and Mr. Ted Hawthorne were able to find the time to meet with project staff in Palo Alto and also at Sacramento to review and comment on the specific module content. We are much indebted to them and hope that they find the materials supportive of their statewide goals for improving the vocational and living skills of handicapped persons.

The American Institutes for Research (AIR) staff working on this project were aware of the potential of the modules for shaping educational practice affecting the handicapped. They gave extra effort within a very constrained budget and tight time line for development. Drafting of the instructional materials was a shared responsibility, as follows:

Robert A. Weisgerber-
Developing a General Understanding
Serving the Orthopedically Handicapped
Developing a Plan for Action

Claudette Smith-
Serving the Mentally Retarded

Richard Bond-
Developing a Positive Attitude

Patricia Maloney-
Serving the Communication Impaired

Caroline Dillman and Patricia Maloney-
Serving the Visually Handicapped

Rather extensive resource sections were included in all of the modules, with the exception of the modules Developing a Positive Attitude and Developing a Plan for Action. These resource sections were largely developed by Claudette Smith. Similarly, all of the modules except the Plan for Action module contained assessment sections. These were developed by Robert A. Weisgerber and Richard Bond, with assistance from Claudette Smith.

Preparation of the adjunct audiovisual materials was again a shared responsibility of project staff. Robert Weisgerber did the on-site photography, Robert Wilson coordinated the titles and graphic slides, Robert Weisgerber prepared the audio scripts, and Claudette Smith did the narrations.

Project materials were typed by Angelica Hampel, whose perseverance through the various stages of module revision was much appreciated. New to the secretarial role, she earned the respect of all the staff for the important contributions she made in the reaching of project goals.

Lastly, though too numerous to mention, sincere thanks are due to the many educators and handicapped students that participated in the project, as sources of information, photographic subjects, and pilot and field test participants. The project products would have been far less useful without their interaction and helpfulness.

R.A.W.

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NATURE OF THE PROBLEM

Background of Need

Vocational education is a well established component of education at the secondary and post-secondary levels. It is diverse in nature, offering a wide range of training opportunities in a variety of contexts, including school based programs, community based programs, and combinations of the two. In short, it is viewed as practical preparation for a productive life, and for the personal independence and the economic security that employment provides.

Handicapped persons, according to the United States Auditor General's Report to Congress (Office of Education, 1976), have not been given the full benefit of participating in vocational education programs, even though they stand to gain more from them, on a relative basis, than do many non-handicapped persons. That is, without training to equip them for gainful employment they are much more likely to require state and federal subsidy than those who are able bodied.

Recent legislation at the federal level and in some states, has mandated equitable educational services for the handicapped, including access to appropriate vocational education, and has also sharply encouraged the hiring of the handicapped by employers. Further, progress is being made toward the elimination of functional barriers, such as inadequate facilities design, transportation, and so on, with the intention of making it more possible for handicapped persons to move more freely in their environment, whether at school, on the job, or in transit. This increasingly direct involvement with non-handicapped persons is referred to as "mainstreaming the handicapped."

While it would seem that the vocational frustrations of the handicapped are well on the way to being resolved, a related and serious problem is yet to be overcome. Legislation per se cannot assure that appropriate, quality instruction will be provided to the handicapped persons, especially when vocational educators, through no fault of their own, lack relevant information, attitudes, and an awareness of course modification techniques for special needs persons. This project was intended to help in that regard.

Project Purpose

Specifically, it was the purpose of this project to develop a comprehensive set of instructional materials related to instruction of the handicapped that would:

- be broadly useful for inservice training of vocational educators, ranging from superintendents, to coordinators and counselors, to classroom teachers, either in workshops or in individual study contexts.
- be useful at the university and college level in preservice training of vocational educators, including student teachers and those pursuing special masters degree programs.
- convey information at various levels of specificity, including a) a general understanding of the attitudes, problems, and concerns which affect the handicapped as a group, b) an awareness of the needs arising from selected types of disabilities and impairments, and c) a strategy for use when planning education for an individual handicapped student.

Moreover, an effort was made to have the materials reflect "the California philosophy" as advanced by the Department of Education (both special education and vocational education offices), and to equally emphasize the national priorities, both legislative and social, in order to encourage the broadest possible use of the materials across the country.

With these general aims in mind, the overall objectives of the project were:

1. to develop and pilot/field test a modular, prototype instructional series on Mainstreaming the Handicapped in Vocational Education for use by vocational educators.
2. to develop adjunct audiovisual materials for selected modules (those dealing with specific handicapping conditions), drawing heavily upon ongoing secondary programs in which handicapped persons are receiving vocational training.
3. to work cooperatively with state department personnel and a consultant group representing the vocational constituencies, to ensure the appropriateness of content and course structure in relation to the priorities of professional educators.

4. to selectively disseminate the project products or information about them to key persons involved in programmatic efforts to improve the vocational services available to the handicapped.

METHOD OF APPROACH

Acquisition of Relevant Information

At the outset of the project four primary information sources were used; 1) a review of the literature led to acquisition of texts and source books of information that seemed especially promising, 2) a search of the ERIC system revealed selected reports of interest, 3) a visit to the California Department of Education resulted in the collection of a variety of departmental documents and resource listings, and 4) consultation with an Advisory Panel provided current, California-relevant insights. These information sources yielded a great deal of information, and a number of the publications (through bibliographic citations) led to other source materials, many of which are now on file at AIR.

Vocational Advisory Panel

The Advisory Panel was fully involved at the planning stage for identifying priorities, in the draft review stage for the critiquing of content and format, in the pilot tryout stage for the identification of teacher volunteers, and in the review of the printed and audiovisual materials.

On a number of occasions individual panel members were contacted when questions arose that pertained to their special areas of expertise. The Advisory Panelists included:

Ted Hawthorne, Special Education Consultant, Office of Special Education, representing both vocational and special education; involved in organizing statewide teacher education workshops (state level viewpoint).

Ralph Bohn, Ph.D.; Dean, Continuing Education, San Jose State University, involved in organizing statewide continuing education for vocational educators (university and college viewpoint).

Robert Hendricks, Coordinator of Student Services, Regional Occupation Program (R.O.P.), San Mateo County, responsible for administration of a large, community based instructional program; involved in staff development (regional occupation program viewpoint).

Emogene Driscoll, Vocational Coordinator for the Handicapped, San Jose Unified School District, responsible for coordination of city wide effort to involve handicapped in vocational education; active in work placement of handicapped in community (city schools viewpoint).

Tom Kellis, Resource Teacher, Berkeley Unified School District, involved in special education and vocational education; familiar with adaptive procedures for the visually handicapped in the classroom and in R.O.P. settings (teachers viewpoint).

Dan Cahn, Director of the Center for Education, Vocational and Independent Living Skills, Castro Valley Public Schools, concerned primarily with job development for handicapped persons not adequately served by secondary school programs; familiar with problems of the mentally retarded (adult education viewpoint).

Design and Development of Materials

At the outset, it was recognized that there was a wide range of potential users of the modules within the vocational education field. Administrators, counselors, work experience coordinators, and classroom teachers in high schools and regional occupation programs all could theoretically benefit, but clearly would have varying scopes of concern. Further, it was apparent that in-service staff development sometimes took the form of individualized study (especially in smaller, more remote districts), and at other times took the form of workshops or credit-bearing college courses. With these variants in mind, the design of the modules emphasized maximum flexibility, as shown in Figure 1.

Materials development and pilot tryouts. Guidelines for the major topics to be covered in the modules were established in cooperation with the Advisory Panel. Guidelines for the style of writing and the overall content outline were established by the project director and project staff. Appendix A shows the table of contents for the seven modules.

A very important part of module development was the review of the draft content outlines and later the draft materials by State Department consultants in the Offices of Special Education and/or Vocational Education.

MAINSTREAMING THE HANDICAPPED IN VOCATIONAL EDUCATION

SET 1

Recommended for administrators, counselors, vocational educators, coordinators, and pre-service trainees. Thoroughly covers the broad issues involved in mainstreaming of the handicapped.

Module A: Developing a General Understanding

Covers rights and entitlements of the handicapped; capabilities and characteristics of handicapped persons; training the handicapped for competitive employment; shaping the training environment; and evaluation of instructional outcomes. Includes an extensive bibliographic resource section and listing of agencies and service groups providing services to the handicapped.

Module B: Developing a Positive Attitude

Includes a section on understanding attitudes and how they are formed; and a discussion of how attitudes can affect success in teaching the handicapped. A brief assessment section is provided.

SET 2

Recommended for vocational educators, coordinators and pre-service trainees concerned with serving particular types of handicapped students or a particular student. Gives more detailed information on specific handicaps and emphasizes planning and adaptation of instruction according to individual need.

Module C-1: Serving the Orthopedically Handicapped

Module C-2: Serving the Visually Handicapped

Module C-3: Serving the Mentally Retarded

Module C-4: Serving the Communication Impaired

Roughly paralleling each other, but varying in content; these specific modules discuss the educator, the student, and the task; establishing a plan for individual instruction; and carrying out a plan of individual instruction. Each contains a bibliographic resources section pertinent to the type of handicap, and each includes a brief assessment section.

Module D: Developing a Plan for Action

This module is structured in a workbook format, calling for step-by-step development of 1) a plan for an individual student, 2) the carrying out of instruction, 3) individual assessment, and 4) placement of the student. Meant primarily as a working tool for current use by the vocational educator, it could also be used in pre-service and in-service training if sample case files are locally available.

Figure 1. Design of the Seven Instructional Modules

These individuals, whose expertise was most helpful, were:

Mr. Ted Hawthorne
Consultant on the General Understanding, Positive Attitude, and Plan for Action module.

Dr. Winnie Bachmann
Consultant on the Orthopedically Handicapped module.

Dr. Gordon Duck
Consultant on the Communication Impaired module.

Mr. Fred Hansen
Consultant on the Mentally Retarded module.

Mr. Jack Hazekamp
Consultant on the Visually Handicapped module.

As a check to be sure that the content developed cooperatively with the state special education consultants was in fact consistent with the general guidelines of the Advisory Panel, as representatives of the vocational education constituency, each panelist was assigned a particular draft module to review in depth. Their viewpoints and comments were shared with AIR staff in a special meeting of the Advisory Panel.

In addition to the critical review provided by the respective state department consultants, and by the Advisory Panelists, each of the instructional modules was tried out on a pilot basis in two school districts. Vocational educators who participated in pilot tryouts represented both high schools and regional occupation programs. These tryouts were carefully monitored by AIR staff and the teacher-participants were encouraged to point out any and all problems encountered, whether related to clear communication in the text or to the scope of the coverage in the material. Following these expert views and pilot tryouts with potential users, the draft modules were revised in accordance with the suggestions received.

Adjunct audiovisual materials. Inasmuch as verbalization within print materials lacks the concreteness and credibility of photographs, it was decided that adjunct audiovisual materials (slide-tape sets) should be available to augment the four modules dealing with providing services for the four types of handicapped students; the mentally retarded, orthopedically handicapped, communication impaired, and visually handicapped. Typically, each set of audiovisual materials consists of about 60 slides

with an accompanying fifteen minute tape. They depict actual examples of adaptive vocational procedures and suggest special educational considerations applicable to each of the handicapping conditions.

To obtain these pictorial materials, a number of knowledgeable persons at the state level, as well as on the Advisory Panel, were invited to nominate school districts throughout California which were thought to excel in their provision of services to the handicapped within regular vocational education classes. About 60 nominations were made, and about a third of these were repeated on more than one nomination form. Using the list of duplicate nominations, arrangements were made to visit and photographically document selected aspects of a number of these vocational programs. (Release forms were obtained from persons who were photographed.) By design, schools for documentation were chosen from both Northern and Southern California, and from both high school programs and regional occupational programs.

Altogether, some fourteen school districts, regional occupation programs or other service agencies cooperated, either by participating in photographic documentation or in pilot testing. These included:

Berkeley Unified School District	Orientation Center for the Blind, Albany
Fullerton Joint Union High School District	San Diego City Regional Occupation Program
Grossmont Union High School District	San Francisco Unified School District
La Puente Valley Regional Occupational Program	San Jose Regional Vocational Center
Los Angeles City Unified School Dist.	San Jose Unified School District
Long Beach Unified School District	San Mateo County Regional Occupation Program
North Orange County Regional Occupational Program	Selaco-Downey High School, Los Angeles County

Among the occupations for which adaptive training was illustrated were:

- woodworking, carpentry
- construction trades
- electronic and radio repair

- welding and metalwork
- plastics forming
- horticulture and floristry
- dental assisting
- upholstering
- typing and office machine operations
- baking and food preparation
- hotel services
- banking
- auto body and auto repair
- child care services
- drafting and graphic illustration
- sewing
- retail sales
- switchboard operation

Field Tests

In order to establish the general value of the modules as produced, arrangements were made to have them evaluated by a range of potential users in a variety of school settings. Three high schools, three R.O.P.s, and one county office were involved. Field testing was accomplished in Orange County in Southern California, and in San Mateo County in Northern California. Additional evaluations were obtained from members of a graduate level class in industrial arts at San Jose State University. Some 29 persons completed evaluation forms. They included:

2 superintendents
2 guidance counselors
11 educators in business/office skills
7 educators in vocational home economics
2 educators in trades areas
2 educators in technical areas
1 undergraduate student teacher (home economics)
2 graduate students (teachers of industrial arts)

Because the modules differed markedly from one another both in type of content and intended primary audiences, the field test was structured to assess their differential impact. It should be kept in mind that the ideal use of the modules (the sequential study of modules A, B, C, D as shown in Figure 1) would extend over a considerable period of time, far in excess of what could be reasonably requested of field test participants. Accordingly, each participant studied one or two modules rather than all seven modules, within a design that purposely varied the combinations of modules being studied.

It was felt that rather than develop an arbitrary test of knowledge gained, it would be more appropriate to establish the priorities of interest and the immediacy of need for information as expressed by the participants before they read the modules, and then to have them evaluate whether the modules exceeded, met, or fell short of their expectations in fulfilling those interests and needs. This procedure is essentially an adaptation of an evaluation technique used by Kiresuk and Sherman (1968) in connection with the evaluation of clinical services in community mental health programs.

In addition to obtaining their written evaluations, interviews were carried out with all field test participants to invite more general comments about the materials. The results of the field test are summarized in the next section of this report.

RESULTS

Field Testing

Concerns in the field. On the forms for evaluation, space was provided for the field test participants to write down questions that they had which they hoped would be answered in the materials. The list below reflects the range of questions that seem to recur most frequently in the minds of vocational educators as they address the possibility of their teaching handicapped persons:

- How do handicaps limit performance?
- How can I get needed funds?
- How can other students and employees be motivated?
- How can I individualize my instruction?
- What materials and resources are available?
- How does my attitude affect my students?
- What can be done about the pupil-teacher ratio?
- What types of employers will hire the handicapped?
- How do I set realistic goals for the student?
- What are the legal rights of the handicapped?
- What can be done to adapt the learning environment?
- What jobs are the handicapped capable of doing?
- What are the characteristics of specific disabilities?
- Who can help me with problems, questions, etc.?
- What safety and liability factors exist?

No attempt has been made to prioritize this list. However, it is worthy of note that many of the questions are dealt with in one or more of the modules. Presumably, a reader of modules A, B, C, and D would have many of the questions answered.

Outcomes. For convenience of exposition, the results will be summarized for level of interest and immediacy of need, as expressed by the

participants before reading the modules. Level of interest and need will be compared with participants' satisfaction with the modules after reading them in order to determine module effectiveness.

It should be noted that prior to the analysis of field test data, two members of the project staff who were thoroughly familiar with all the modules rated them in terms of the main ideas which they were thought to convey and the extent to which this differed across the modules. These main ideas, and their judged relative emphasis in the various modules is shown in Table 1.

TABLE 1

Main Ideas Presented and Their Judged Emphasis in Each Instructional Module as Estimated by Project Staff

Main Ideas	Modules			
	A*	B*	C* 1,2,3,4,	D*
Rights and entitlements	MAJOR	Minor	Minor	Minor
Attitudes toward the handicapped	Moderate	MAJOR	Minor	Minor
Information about different handicapped conditions	Minor	Minor	MAJOR	Minor
Training the handicapped for competitive employment	Moderate	Minor	MAJOR	Moderate
Helping a particular handicapped student	Minor	Minor	Moderate	MAJOR

* A = Developing a General Understanding
B = Developing a Positive Attitude
C_1 = Serving the Orthopedically Handicapped
C_2 = Serving the Visually Handicapped
C_3 = Serving the Mentally Retarded
C_4 = Serving the Communication Impaired
D = Developing a Plan for Action

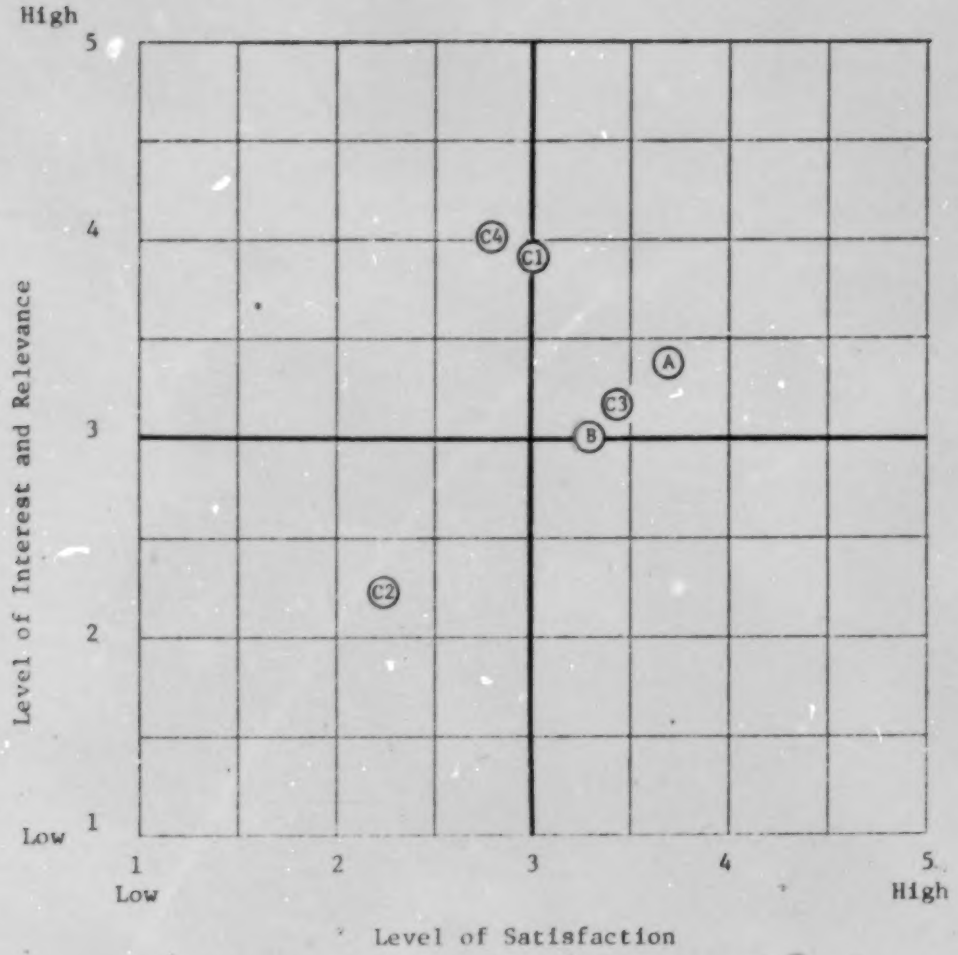
Clearly, as shown in Table 1, a reader of Module A would not be expected to learn a great deal about helping a particular handicapped student, nor would a reader of Module D be expected to learn a great deal about rights and entitlements. Thus it is important to keep in mind that the more critical field evaluation results concern the satisfaction expressed in relevant modules, that is, those intended to convey that particular type of information to a major or at least a moderate degree.

Scaling of the measures. Before reading the modules, participants described themselves as having either high, moderate, or little interest in each of the five main ideas. They were also asked to indicate whether their interest was relevant to a present need, future need, or of little relevance. When aggregated, these variables form a five step composite scale of interest and relevance.

After reading each of the modules A, B, and C (any version), the evaluator-educators used a five point scale to rate whether their expectations had been fulfilled for each of the first four main ideas as listed in Table 1. Response alternatives were: maximum success, learned more than expected, learned what was expected, learned less than expected, minimum level of success.

Outcomes for Modules A, B, C_1, C_2, C_3, C_4. Figure 2 summarizes the results in terms of the differential effects of reading various modules on the dimension of rights and entitlements.

In interpreting the results of Figure 2, it would seem that Module A, Developing a General Understanding, did, to a considerable degree, satisfy its readers in terms of learning about the rights and entitlements of the handicapped. Surprisingly, though expected only to contribute in minor ways to this idea, it appears that three of the other modules (B, C_1, and C_3) also met or exceeded their reader's expectations on this dimension of content. Modules C_2 and C_4, however, did not satisfy their readers' expectations.



(A)	Developing a General Understanding module	N=9
(B)	Developing a Positive Attitude module	N=11
(C1)	Serving the Orthopedically Handicapped module	N=9
(C2)	Serving the Visually Handicapped module	N=4
(C3)	Serving the Mentally Retarded module	N=7
(C4)	Serving the Communication Impaired module	N=5

Figure 2. Level of Satisfaction Expressed by Readers of Different Modules on the Main Idea of Rights and Entitlements

Figure 3 shows the level of satisfaction expressed by various module readers relative to the main idea of attitudes toward the handicapped. As expected, Figure 3 shows that readers of module B, Developing a Positive Attitude, amply satisfied their interests and needs on the dimension of attitudes toward the handicapped. Interestingly, all other modules also were rated highly on the attitude dimension, probably thereby reflecting the strong tone of positive thinking and positive reinforcement that was consciously striven for during their preparation.

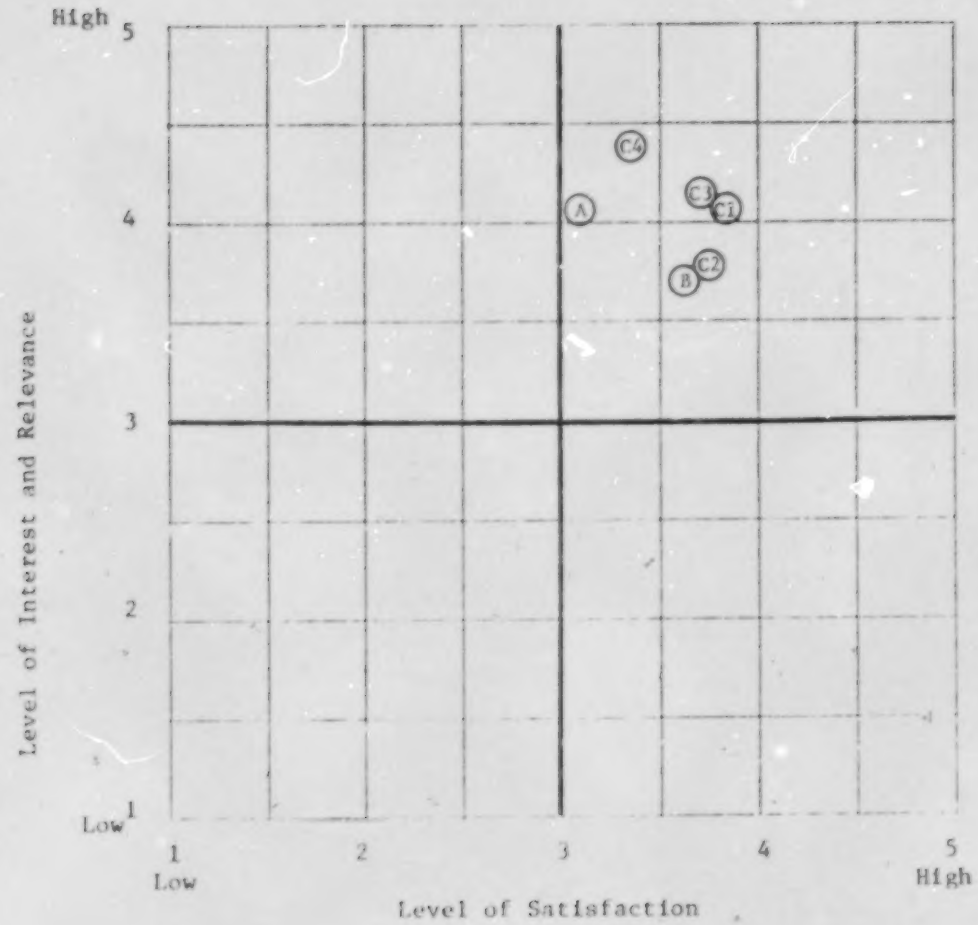
Figure 4 shows the level of satisfaction expressed by various module readers relative to information about different handicapping conditions.

The results shown in Figure 4 make clear that the four instructional modules C_1, C_2, C_3, and C_4 did, as hoped, convey information about handicapping conditions to a level that generally exceeded the expectations of the readers of each respective module. The General Understanding module, and Positive Attitude module, neither of which focussed on this aspect, were also apparently satisfying to their readers in this regard.

Figure 5 shows the level of satisfaction expressed by various module readers relative to training the handicapped for competitive employment.

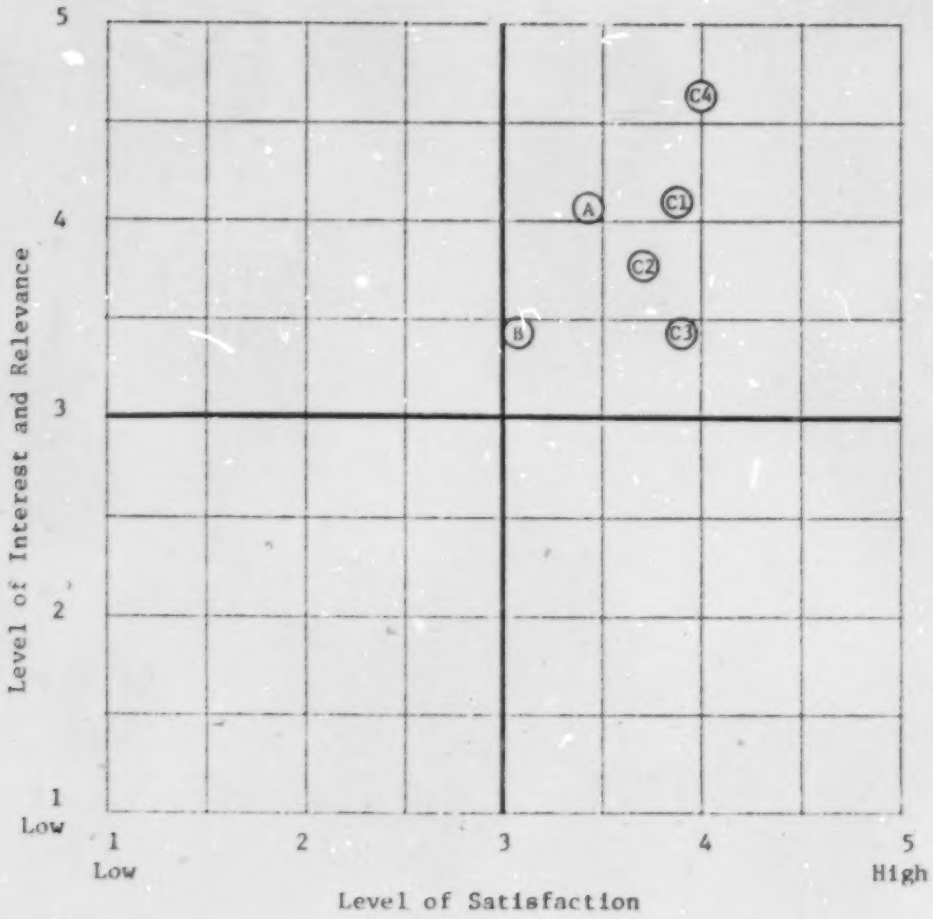
It can be seen in Figure 5 that all the modules again satisfied their readers, though the modules on Serving the Orthopedically Handicapped and Serving the Mentally Retarded apparently are the strongest on this dimension of content.

Outcomes (usefulness) for Module D. Earlier it was pointed out that Module D, Developing a Plan for Action, was substantially different from the other modules in that it was essentially in a workbook format. It was not meant to supply new information but rather to be used by vocational educators as a practical tool during the stages of planning, instruction, and assessment/placement for an individual handicapped student. Accordingly,



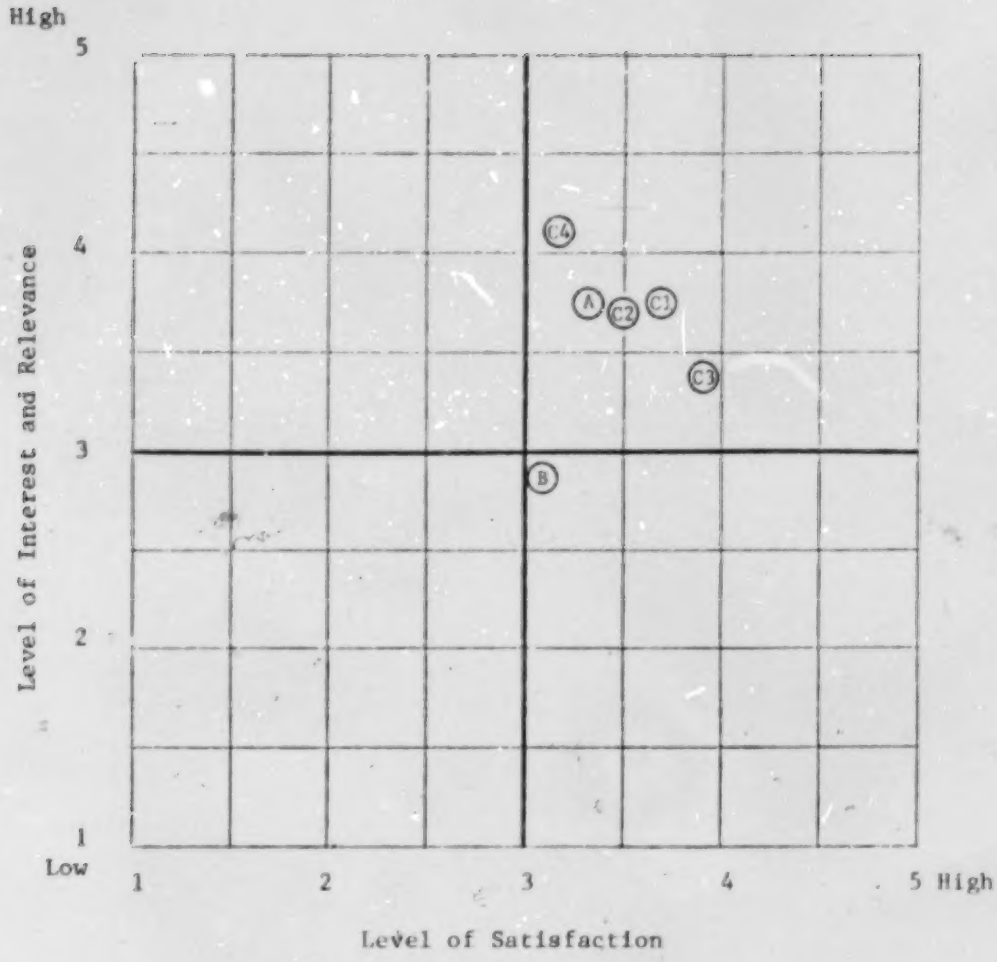
(A)	Developing a General Understanding module	N=9
(B)	Developing a Positive Attitude module	N=11
(C1)	Serving the Orthopedically Handicapped module	N=9
(C2)	Serving the Visually Handicapped module	N=4
(C3)	Serving the Mentally Retarded module	N=7
(C4)	Serving the Communication Impaired	N=5

Figure 3. Level of Satisfaction Expressed by Readers of Different Modules on the Main Idea of Attitudes Toward the Handicapped



(A)	Developing a General Understanding module	N=9
(B)	Developing a Positive Attitude module	N=11
(C1)	Serving the Orthopedically Handicapped module	N=9
(C2)	Serving the Visually Handicappped module	N=4
(C3)	Serving the Mentally Retarded module	N=7
(C4)	Serving the Communication Impaired module	N=5

Figure 4. Level of Satisfaction Expressed by Readers of Different Modules on the Main Idea of Information About Different Handicapping Conditions



(A)	Developing a General Understanding module	N=9
(B)	Developing a Positive Attitude module	N=11
(C1)	Serving the Orthopedically Handicapped module	N=9
(C2)	Serving the Visually Handicapped module	N=4
(C3)	Serving the Mentally Retarded module	N=7
(C4)	Serving the Communication Impaired module	N=5

Figure 5. Level of Satisfaction Expressed by Readers of Different Modules on the Main Idea of Training the Handicapped for Competitive Employment

Module D was rated by the participants as to whether it was thought to be extremely useful, very useful, somewhat useful, or of little or no use for each of the three stages. By aggregating responses for the three stages, a 10 point scale of usefulness was derived for the Plan for Action module.

Figure 6 shows the extent of usefulness attributed to Module D by those participants who read that module.

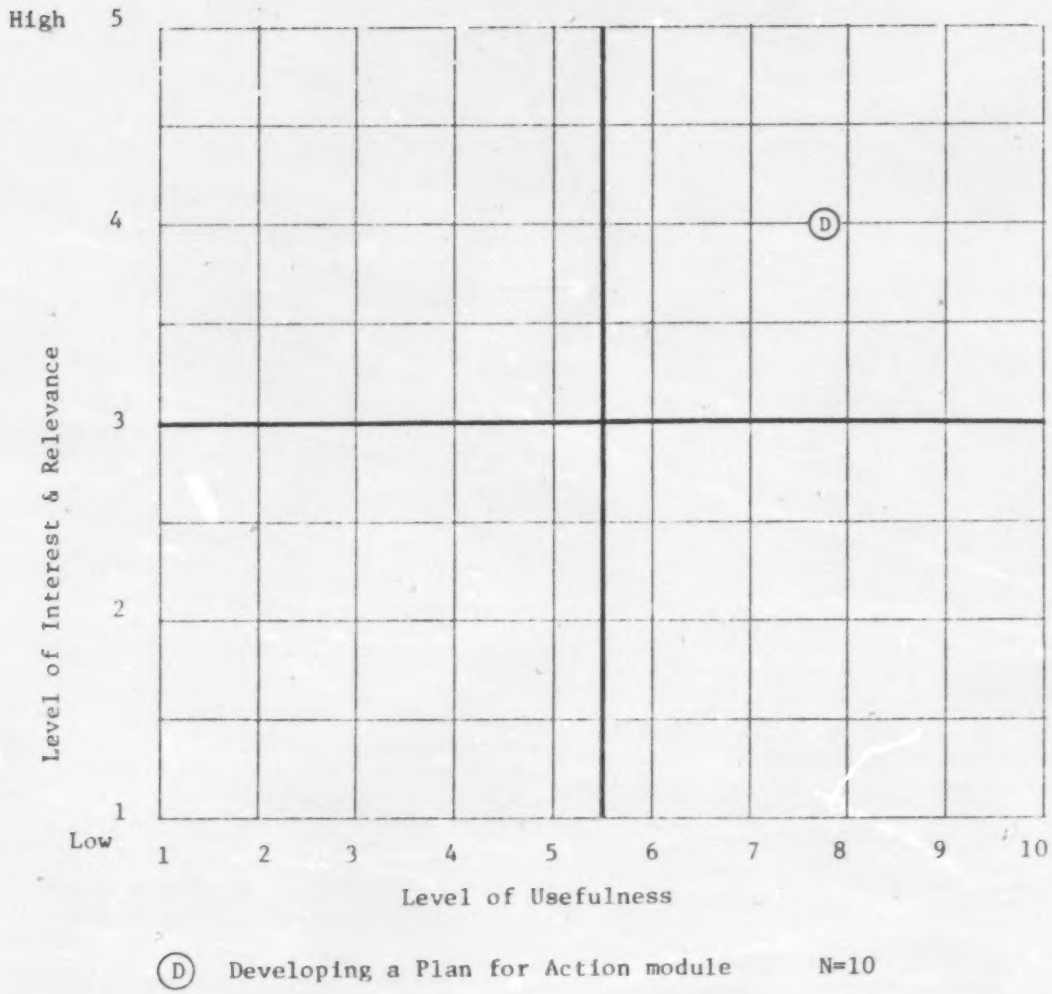
It is evident in Figure 6 that Module D, Developing a Plan for Action, reached nearly eight on the ten point scale. On the whole, this meant that the module was considered very useful by its readers for its intended function.

It should be borne in mind that the results in Figure 6 are only an estimate of usefulness. This is because the participants were asked to evaluate the module as though they were given the module to use throughout a school year. Of course, this was not possible within the time constraints of the project. In that sense, then, the estimate is necessarily a crude one. Further, since some of the Plan for Action evaluators did not read a related information-bearing module (either C_1, C_2, C_3, or C_4,) and thus had limited backgrounds of information, the estimates of usefulness reported are likely to be quite conservative.

Discussion of module ratings. Evaluations of the various modules tended to be fairly consistent, varying only a point or two on their scales. The Attitude model tended to have the greatest range of responses (a three point range).

Viewed overall, in 23 of 25 comparisons evaluators rated modules as having met or exceeded their expectations. However, AIR staff had not intended the two modules (Serving the Communication Impaired and Serving the Visually Handicapped) to deal importantly with legal rights and entitlements (the main idea on which the modules fell short). Therefore, this finding was not a big disappointment.

By the same token, it is fair to ask why other modules seem to have generally met with reader satisfaction on topics that were not especially emphasized. For example, why would readers have rated the module Serving the Mentally Retarded highly on this same dimension? Inspection of the



(D) Developing a Plan for Action module N=10

Figure 6. Level of Satisfaction Expressed by Readers on the Main Idea of Helping a Particular Handicapped Student.

patterns of module study by the participants reveals no particular biasing factor. That is, only one of the evaluators studied both the General Understanding module and the Mentally Retarded module, so that any that carry-over of the rights and entitlements main idea from one module to the other could not have accounted for the higher rating. One is left with the conclusion that the modules generally conveyed more than was anticipated by the project staff.

Other Evaluative Indications

Statements by readers. Anecdotal remarks on the evaluation sheets and comments offered by the vocational educators during the post-evaluation interviews give an interesting perspective on their reactions to the materials. Although their comments were far too numerous to completely list here, a few of them will help to establish the generally positive "tone" of reader reactions. The fourth quote under each module represents a dissenting viewpoint.

Developing a General Understanding

1. Guidance counselor, "A pleasure to read; resources section very useful."
2. Home economics instructor "Really liked the whole concept; question and answer technique was effective."
3. Industrial arts instructor, "I felt the handbook was very well put together, the information was up-to-date and pertinent; I found myself holding a constant interest level when going through the manual."
4. Home economics instructor, "Some information in first section a little too meaty, could be cut for understanding."

Developing a Positive Attitude

1. Business skills instructor, "It makes you realize that the handicapped deserve an equal break in regard to an education."
2. Superintendent, "I enjoyed it; the definition of attitudes is super ... the idea that attitudes are contagious."
3. Business skills instructor, "The main message was a positive attitude approach, that everyone can do something productive if we just modify instruction."

4. Guidance specialist, "It has grammatical inconsistencies."

Serving the Orthopedically Handicapped

1. Home economics instructor, "Made me feel more confident in dealing with these students when it said 'he may blossom in your class.'"
2. Clothing teacher, "Very interesting to read; concise and reviews were good."
3. Typing teacher, "I had a one handed girl in my class who learned to type 40 WPM, as fast as her classmates; although I already had much of this information, I learned I could get special help provided."
4. Plastics technology instructor, "Some review questions too esoteric, answers not readily apparent from reading module."

Serving the Visually Handicapped

1. Business skills instructor, "I was unaware of so many sources of educational aids for the visually handicapped."
2. Electronics instructor, "Seemed complete and answered a lot of questions I had in this area."
3. Business skills instructor, "Brief, but good that it was comprehensive."
4. Woodshop instructor, "It's a lot harder than it sounds here."

Serving the Mentally Retarded

1. Business skills instructor, "I have a much clearer picture now of how to assess the handicapped student's potential and capabilities and find the information I need in order to work effectively with that student."
2. Business machines instructor, "Very well written for someone like me that has never been able to individualize for the handicapped."
3. Home economics instructor, "I have worked with the handicapped always in my teaching, yet I have never thought about breaking tasks down."

4. Sewing instructor, "Should stress cooperation with special educator for planning purposes."

Serving the Communication Impaired

1. Secretarial training instructor, "It would have helped me with a learning impaired student if I had these materials previously."
2. Plastics technology instructor, "It had good sections on attitudes toward the handicapped and information about different handicapping conditions."
3. Business skills instructor, "Good suggestions were indicated in module so am better aware how to get my handicapped individuals ready for a job."
4. Auto body instructor, "Not enough information about liability."

Developing A Plan for Action

1. Coordinator of business education, "It pointed out that it's not difficult to modify for the handicapped student in heterogenous groups."
2. Superintendent of R.O.P., "An organized, systematic way of setting up a program."
3. Child care instructor, "Gives an excellent plan of attack; the instructor wouldn't have to do everything all at one time."
4. Auto body instructor, "It doesn't define the role of the instructor."

Graduate class reaction. As an exploration of how the modules and adjunct audiovisual presentation might be received by graduate level students (such as in the Master of Arts in Vocational Education program available through the Consortium of California State University and Colleges) the project director served as guest lecturer at San Jose State University; his presentation was to a graduate class in industrial arts.

Since the graduate students had been assigned the reading of the General Understanding and Positive Attitude modules prior to coming to class, the main activities consisted of an explanation of the overall

module series, the showing of the audiovisual materials (for the Visually Handicapped module), and the conduct of a question and answer session.

It appeared that the modules and slide/tape did provide sufficient background information to stimulate a lively discussion. Of particular interest was the fact that when one student raised questions concerning the "fairness" of giving special treatment to handicapped students in regular classrooms, two other students were able to counter with justifications based on content they gained from the modules.

The two principal concerns of the class, neither of which could be attributed to the modules, were 1) their concern for the extra time the handicapped would take in their "overly crowded" classes, and 2) skepticism that the handicapped could ever become competitive in tight job markets.

Generally, the class reflected the resistance to mainstreaming that can be expected in the majority of schools and which legislative mandates now disregard. That is, the concern of the legislation is centered on what's good for the student; the concern of teachers who are as yet unexperienced in dealing with handicapped, seems more concerned with preservation of their existing roles.

Study time. Evaluation participants were asked to estimate the time they devoted to study of each module. This information can be useful in the planning of in-service workshops and in the establishment of course credit parameters where these materials are involved. Approximate reading times were found to be as follows:

Module A =	2 hours, 20 minutes	(87 pages)
Module B =	1 hour, 40 minutes	(35 pages)
Module C_1 =	1 hour, 40 minutes	(47 pages)
Module C_2 =	2 hours	(62 pages)
Module C_3 =	1 hour, 40 minutes	(63 pages)
Module C_4 =	2 hours	(53 pages)
Module D =	1 hour	(18 pages)

Additional time requirements to complete assessment sections within the modules, or to complete the blanks in module D, were not estimated.

Dissemination requests. An indirect indication of the potential value of the modules stems from requests for information and/or sets. Inquiries

have resulted from a presentation at a state conference of special educators, and from a variety of other channels of information. Most field test participants requested to keep their copies, and complimentary copies have been distributed to all participating school districts, Advisory Panelists, State Consultants and to the Directors of the State Offices for Vocational Education and Special Education.

DISCUSSION

The results of this field test would seem to indicate that the modules do meet with user satisfaction in terms of expressed needs and interests. Interviews with the participants provided insights into various ways the modules had affected the evaluator's outlooks and knowledge base, for the most part quite favorably so. At the same time, it was recognized that a number of the vocational educators had lingering questions and concerns after study of their assigned modules, many of which were points emphasized in other modules that were not reviewed by the evaluators. This would suggest that isolated use of modules should be avoided, and would tend to support the pairing of modules shown in Figure 1.

There was a split of opinion among the participants as to whether the modules would be most appropriately used in individual study contexts or whether they should be a part of an organized workshop or class. This appears to be mostly a matter of individual choice and local school district preference. Observed study times would seem to indicate that use of the modules is feasible in either context.

Several persons questioned why there were not modules on other handicapping conditions, such as emotional disorders and learning disabilities. It was explained that only about 80% of the requested funds for the project had been granted and that these modules had been dropped pending further funding. No further funding has yet taken place, so this gap remains in the module series.

A limited number of distribution copies have been printed to meet requests until broader publication takes place. A presentation is planned (a month following the close of the project) at the national conference of the Association for Special Education Technology. It is expected that this will stimulate interest in the series. Finally, a mailing of specimen copies to chief state school officers will help to assure the national visibility of the product.

RECOMMENDATIONS

The following recommendations are based on the generally positive reaction of vocational educators to the modules on Mainstreaming the Handicapped in Vocational Education.

State and Federal Level

- Given the present low level of awareness of regular vocational educators about the handicapped and ways to appropriately serve them, it would be timely for state and federal governments to encourage broad dissemination of these modules. State printing and dissemination to all school districts (possibly using Part B funds) would probably result in their most rapid availability in the field. Alternatively, flyers describing the materials could be distributed through state channels, including information about where copies could be obtained. At the least, the modules should be incorporated in present state-sponsored workshops or conferences in vocational education.
- Because the materials were developed for maximum relevance to California's educational program, other states may wish to underwrite their modification so that they reflect their own program priorities.
- Federal support should be made available to supplement the series by adding modules on emotional disorders and learning disabilities.

School District Level

- Sets of these modules should be available for teacher reference in professional libraries within school districts and in vocational education program offices.
- Inservice workshops and other staff development activities should be arranged to encourage vocational educators to familiarize themselves with the content of the modules. Existing adjunct audiovisual materials could help to stimulate discussion in these contexts.

- Special district-provided assistance should be available to educators who attempt to work with mainstreamed handicapped students for the first time; this assistance should especially help in answering questions, discussing problems, adapting instruction, etc.

Individual Educator Level

- Study and use of these modules would be best undertaken in accordance with the module structure and sequence outlined in Figure 1 of this report.
- Instructors in the field should explore the credit earning potential of the modules, either through their local school district's existing arrangements with nearby higher education institutions, or through contact with the Consortium of California State University and Colleges under the Masters of Arts in Vocational Education external degree program.
- Teachers should recognize that these materials are merely guides, not total solutions to the challenge of working with handicapped persons or concerned others, such as employers. Rather, educators should adopt a "can do" attitude, and should employ time tested procedures for effective individualization in the classroom, maintaining flexibility in their requirements and expectations for individual handicapped students.

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APPENDIX A

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